Remarks:

Reconsideration of the application is respectfully requested.

Claims 1 - 12 are presently pending in the application.

On pages 2 - 6 of the above-identified Office Action, claims 1 - 12 were rejected as allegedly being obvious under 35 U.S.C. § 103(a)over U. S. Patent No. 6,289,041 to Krasner et al. ("**KRASNER**") in view of U. S. Patent No. 6,067,314 to Azuma ("**AZUMA**").

Applicants respectfully traverse the above rejections.

I. Applicants' claimed invention requires, among other limitations, despreading the received synchronization signal and determining a frequency deviation based on the despread signal.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 recites, among other limitations:

> "**despreading the received synchronization signal** with the known code and taking into account the time period estimated in the estimating step;
>
> **determining** a frequency deviation between the first frequency and the second frequency **based on the despread received synchronization signal**; and
>
> **fine-tuning** the second frequency to the first frequency **based in part on the despread received synchronization signal**." [emphasis added by Applicants]

Independent claim 7 incorporates the method of claim 1, and thus additionally includes the above limitations, among others.

As such, Applicants' claims require, among other limitations: 1) **despreading the synchronization signal**; 2) **determining** the frequency deviation using the despread signal; and 3) **fine-tuning** a frequency based, in part, on the despread synchronization signal.

II. The KRASNER reference cited in the Office Action fails to teach or suggest, among other limitations of Applicants' claims, despreading the received synchronization signal or determining a frequency deviation based on the despread signal.

On page 3 of the present Office Action, the failure of KRASNER to teach Applicants' claimed invention is described as follows:

> "However Krasner does not teach despreading the synchronization received with the known code and taking into account the time period estimated in the estimating steps and determining a frequency deviation between the first frequency and the second frequency based I [sic] part on the despread received synchronization signal."

As such, **KRASNER** fails to teach or suggest, among other limitations, each of Applicants' claimed "**dispreading the received synchronization signal**" or Applicants' claimed "**determining**" step "**based on the despread received**

synchronization signal". Correspondingly, if the synchronization signal is not despread, **KRASNER** additionally fails to teach Applicants' claimed "**fine-tuning**" step, also based, in part, on the despread synchronization signal.

III. The AZUMA reference cited in the Office Action also fails to teach or suggest, among other limitations of Applicants' claims, despreading the received synchronization signal, determining a frequency deviation based on the despread signal or fine-tuning a frequency, based in part on the despread signal.

In the Office Action, **KRASNER** is combined with the **AZUMA** reference, to allegedly teach the "**dispreading**" and "**determining**" steps not taught in **KRASNER**. More specifically, the Office Action, page 3, last paragraph - page 4, line 2, states:

> "Azuma teaches despreading the received synchronization signal with the known code and taking into account the time period estimated in the estimating steps (see fig. 1 element 9 and col. 3, lines 10 - 50) and determining a frequency deviation between the first frequency and the second frequency based in part on the despread received synchronization signal (see col. 3, lines 57 - 67 and col. 4, lines 1 - 15 and col. 6, lines 58 - 67)."

However, Applicants' respectfully traverse the suggestion in the Office Action that the **AZUMA** reference teaches or suggests Applicants' claimed "**despreading**", "**determining**" or "**fine-tuning**" steps, among other limitations.

Rather, the **AZUMA** reference discloses a direct spread spectrum signal receiving apparatus and synchronism acquisition circuit. Referring to Fig. 1 of **AZUMA**, the direct spread spectrum signal is provided, in parallel, to the synchronism acquisition circuit 7 and the frequency correction circuit 8, **before** the signal is despread. **AZUMA does not despread the synchronization signal or use the despread signal to determine frequency deviation or fine-tune the frequency, as required by Applicants' claims.** The signal in **AZUMA** is not despread until **after** a synchronization signal is used to find a frequency deviation and correct the frequency.

More specifically, **AZUMA** discloses a received direct-spread signal that is fed to a synchronism acquisition circuit 7 and in parallel to a frequency correction circuit 8. The synchronism acquisition circuit 7 of **AZUMA** includes a plurality of matched filters 211 - 21N, related to different frequency offsets. The correlation output signals $Xi^{(k)}$ (Figs. 5A-5D of **AZUMA**) of the matched filters 211 - 21N indicate the present frequency deviation as well as the phase offset **of the spread signal**. See, col. 7, lines 10 - 23 of **AZUMA**.

It should be noted that the matched filters 211 - 21N do not perform any despreading of the spread signal, since these filters only correlate the data sequence of the spread signal with the expected data sequence (i.e., the output signals $Xi^{(k)}$

of Figs. 5A-5B). See column 6, lines 22- 27 of **AZUMA**. Thus, the frequency deviation in **AZUMA** is determined based on a spread signal and not on a despread signal.

In **AZUMA**, the frequency deviation, which is determined on the spread signal within circuit 7, is communicated to the frequency correction circuit 8. **AZUMA**'s frequency correction circuit 8 performs frequency correction on the received, **spread** signal. Column 6, line 56 - col. 7, line 3, of **AZUMA** states:

> "The frequency correction circuit 8 **corrects the frequency of spread spectrum signal** data input from the memory 6 based on the amount of correction of frequency deviation of carrier wave. **The frequency-corrected spread spectrum signal data is sent to the despread circuit 9.**" [emphasis added by Applicants]

In **AZUMA**, the phase offset, determined in the synchronism acquisition circuit 7, is communicated to the despread circuit 9. The despread circuit 9 also receives the **frequency-corrected spread signal** from the frequency correction circuit 8. See, col. 6, lines 56 - 65. In **AZUMA**, only after the deviation is found and the frequency of the **spread signal** corrected, does the despread circuit 9, finally, despread the signal.

Contrary to Applicants' claimed invention, **AZUMA** teaches: 1) determining a frequency deviation **based on the spread signal**,

within the synchronism acquisition circuit 7; 2) correcting the frequency **of the spread signal** within the frequency correction circuit 8; and, only afterwards, 3) despreading the frequency-corrected spread signal in the despread circuit 9.

IV. Applicants' claims are patentably distinguishable over the KRASNER and AZUMA references, taken alone or in combination, and it is requested that claims 1 - 12 be allowed.

In view of the foregoing, it can be seen that the cited **AZUMA** reference cannot be combined with the **KRASNER** reference to teach or suggest Applicants' claimed invention. The **KRASNER** reference fails to teach despreading. The **AZUMA** reference, **fails to teach or suggest**, among other of Applicants' claim limitations: 1) **despreading the synchronization signal**; 2) **determining** the frequency deviation using the despread signal; and 3) **fine-tuning** the frequency based, in part, on the despread synchronization signal.

Clearly, neither **KRASNER**, nor **AZUMA**, whether taken alone or in any combination, teach or suggest all of the features of Applicants' independent claims 1 or 7. Claims 1 and 7 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 or 7. As it is believed that the claims were patentable over the cited art in

their original form, the claims have not been amended to overcome the references.

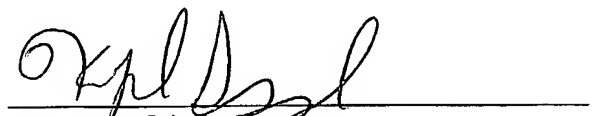
In view of the foregoing, reconsideration and allowance of claims 1 - 12 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



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